



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,978	03/14/2002	Nils Peter Reenberg	742111-133	2999

22204 7590 02/06/2004
NIXON PEABODY, LLP
401 9TH STREET, NW
SUITE 900
WASHINGTON, DC 20004-2128

EXAMINER

NGUYEN, TUAN DUC

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 02/06/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,978

Applicant(s)

REENBERG, NILS PETER

Examiner

Tuan D. Nguyen

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 2-10 been renumbered 12-20.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent number 5,297,214 (Bruney) in view of U.S. patent number 4,491,698 (Larson et al) and further in view of U.S. patent number 5,627,903 (Porrizzo et al).

Regarding claim 11, Bruney discloses diaphragm transducer comprising a planar diaphragm (40), magnets (38) arranged to provide magnetic field strength through said planar diaphragm, said magnets being in magnetic interaction with a magnetically conducting material (36), said magnets being arranged on one side

of said diaphragm, said diaphragm having a plurality of conductors (46, 48) on its planar surface for inducing electromagnetic force acting on said conductors when current flows through said conductors, wherein said magnets are in magnetic; interaction with a magnetically conducting material (36) to conduct magnetic field strength from said magnets to said diaphragm, and said conductors (46, 48) on said diaphragm are arranged in a pattern in relation to said magnetic field strength through said diaphragm, said relation being such that said electromagnetic force acting on said conductors is directed substantially normal to said surface of said planar diaphragm (column 7 lines 5-28).

Bruney does not disclose the magnetically conducting material is not a permanent magnet.

However, Bruney does not restrict to a permanent magnet material (column 5 lines 42-43). Larson et al discloses the steel pole pieces (column 6 line 20) for the magnet assembly.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use a non permanent magnet material by Larson et al in Bruney for conducting magnetism.

Regarding claim 12, Bruney also show wherein said conductors are arranged in a pattern with varying mutual distances and directions (figures 1 and 2, column 6 lines 10-38).

Regarding claims 13-17, Bruney does not disclose a specific dimension and configuration as in the claim limitation of the applicant.

Art Unit: 2643

However, Bruney does not restrict to any specific configuration for a loudspeaker.

Moreover, Larson et al discloses a similar configuration for a diaphragm transducer as the applicant.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use an alternative configuration of the diaphragm transducer by Larson et al in order to obtain a specific acoustic effect for a different application.

Regarding claims 18 and 20, Bruney does not disclose the magnetically conducting material is soft iron.

However, the soft iron is well known in the art.

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use a well known material for instant the soft iron in the diaphragm transducer by Bruney.

Regarding claim 19, Bruney does not disclose wherein said diaphragm comprises a magnetically conducting layer.

However, Porrazzo et al disclose the magnetically conducting layer (column 9 lines 29-35).

Therefore, it would have been obvious to a one of ordinary skill in the art at the time of the invention was made to use the magnetically conducting layer by Porrazzo et al in the diaphragm by Bruney for conducting magnetism.


Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan D. Nguyen whose telephone number is (703) 305-7168. The examiner can normally be reached on M-F 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curt Kuntz can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

TDN
9/24/03


CURTIS KUNTZ
SUPERVISORY PATENT/EXAMINER
TECHNOLOGY CENTER 2600